



RECEIVED #10
MAY 30 2003
TECH CENTER 100/200

1

SEQUENCE LISTING

<110> AGRAWAL, SUDHIR
KANDIMALLA, EKAMBAR R.
BREGMAN, DAVID B.
MANI, SRIDHAR
LU, YI

<120> SENSITIZATION OF CELLS TO CYTOTOXIC AGENTS USING
OLIGONUCLEOTIDES DIRECTED TO NUCLEOTIDE EXCISION REPAIR
OR TRANSCRIPTION COUPLED REPAIR GENES

<130> HYZ-075US2 (475.08.514)

<140> 09/825,489
<141> 2001-04-03

<160> 13

<170> PatentIn Ver. 2.1

<210> 1
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 1
ggtgacagca gcatttggat 20

<210> 2
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 2
ggaacatcat ggtctgctcc 20

<210> 3
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3
ggtccatact catgttgatg 20

<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 4
ctgacctacc acttctgcac 20

<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 5
gtacataag accagtgtgc 20

<210> 6
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 6
ccaaacctgc acgatacatc 20

<210> 7
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 7
ccctgctgca catcgaccga 20

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 8
tgccttaggg atgtcgtaca

20

<210> 9
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 9
caggtcactg aactaaa

17

<210> 10
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 10
ggctaagtga aaagca

16

<210> 11
<211> 2011
<212> DNA
<213> Homo sapiens

<400> 11
cgacgtccag tgcctccagcc ggtgtgagga cagcatatgc tgggggtttt gtccgcacgc 60
caaacggggt tggaggagccc tcttcgcctt cggagagcag agtcaacacg gagagttttg 120
ggacttgaat taaataaaga cagagatggt gaaagaatcc acggcggtgg aattaacacc 180
cttgacattg aaactgttga agggagatac atgttatcag gtgggttcaga tgggtgtgatt 240
gtacttttatg accttgagaa ctccagcaga caatcttatt acacatgtaa agcagttgtg 300
tccattggca gagatcatcc tgaatgtcac agatacagtg tggagactgt acagtgggtat 360
cctcatgaca ctggcatgtt cacatcaagc tcatttgata aaactctgaa agtatgggat 420
acaaatacat tacaaactgc agatgtattt aattttgagg aaacagttta tagtcatcat 480
atgtctccag tctccaccaa gcactgtttg gtacgagttg gtactagagg acccaaaagta 540
caacttttgt acttgaagtc tggatccctgt tctcacattc tacaggggtca cagacaagaa 600
attattagcag ttctcctggc tccacgttat gactatatct tggcaacacg aagtgtctac 660
agtagagtaa aattatggga tgtgagaaga gcatacaggt gtttgattac tcttgatcaa 720
cataatggga aaaagtcaca agctgttgaa tcagcaaaaca ctgctcataa tgggaaagtt 780
aatggcttat gttttacaag tgatggactt cacctctcca ctggttggtac agataatcga 840
atgaggctctt ggaatagttc caatggagaa aacacacttg tgcctcctgt gctgcagttc 900
ataaacagta aaaagagatt gaaattcact gtctcctgtg tctcagttt tgaactatgg agaatttgt 960
ttgtaccat atggtagcac cattgctgtt tatacagttt actcaggaga acagataact 1020
attgcttaag gacattataa aactgttgac tgctgtgtat ttcagtcataa tttccaggaa 1080
ctttatagtg gttagcagaga ctgcaacatt ctggcttggg ttccatcctt atatgaacca 1140
gttctctgat atgatgagac tacaacaaaa tcacaattaa atccggcctt tgaagatgcc 1200
tggagcagca gtgatgaaga aggatgaata tcactcttag tacctttttg tctctgtcta 1260

```

aacttttttaa atgagactgt gtttttttca actgtatggt ctattctcga cagctaaatt 1320
agccctcaaat gggggttaata ttttttctca tgttttataa tgaggttaat atttgcataa 1380
aatcctaaaaa cagactctctg tatagtttat ttatgcaaaa tgtgttctct tatcccgat 1440
gttgtaggctt gggaaagccc tcatgtgtac agtacaagta acacaagctg ttgtacctca 1500
gttgtgacct tcagcagact ttatgaacta taagatgcag tctcagaggga tccagcaagt 1560
gaggccatca gtattgacct tctcttactt gctgtactat cagcctgcct ttctccact 1620
ttaagaatga ttttgcacaag aatgattata tcacattttt cagtgttttc atttaattaa 1740
aaattatttt attctttctt cttcatgtat aatgtctcct actatccaaa atgtgcatca 1800
cctgtcttta tgttaaacct tttggggctc atgtcttttt aatgtcgaaa 1860
caggaggctc ttaactttgt gaaaatccca tgtttgcttt tcattaaagt atgaccaaat 1920
ggcagtttgc gctaactgct gaactctttt tctgtgaaac atctggctta aacatgaat 1980
cctgcctcat taattcaagc agaaaatctc ctggcaggga atctggctta aacatgaat 2011
gctgtaataa aattctatg ttattgtctc a

```

<210> 12

<211> 4714

<212> DNA

<213> Homo sapiens

<400> 12

```

ctgtgttccaa ggcggctggc ggcggtagcg tctctgttcc cttgtggggc ctcgcgcggc 60
ctgggttagt ctttagagaa tgccaaatga gggaaatccc cactcaagtc aaactcaagga 120
cgaagactgt ttacagagtc aacctgtcag taataatgaa gaaatggcaa tcaagcaaga 180
aaagtgttgt gatggggagg tggaggagta cctgtccttt cgttctgtgg gtgacgggct 240
gtccacctct gctgtggggc gcgcactcag agctccagg agagggccag cctctgtcga 300
catcgaccga catcagatcc aggcagtaga gcttagcgcc caggccctgt agctgcagg 360
tttgggtgtg gacgtctatg accaggacgt gctggaacag gtagtgcctc agcaggtgga 420
caatgccaat catgaggcca gccgtgcctc ccagctcgtt gacgtggaga agcagtagtc 480
gtcgttctgt gatgacctca cgtcatgtac gacatcccta aggcataatc ataaaattat 540
tgaaacagct agccctcaag ctgccaccag cagagacatc aacaggaaac tagattctgt 600
aaaaagcagc aagtataata aggaacaaca gctaaaaaag atcactgcaa aacaaaaagca 660
tctccaggcc atcctgtggag gacgagaggt gaaaaattga atagatcacg ccagtctgga 720
ggaggatgca gagccggggc catccagctt tggcagcatg ctcatgctgt tccaggagac 780
tgctctggaa gagctcatcc gcactggcca gatgacacct tttggtacct agatccctca 840
tctgtcagat caagcaaaac tgtcttttga aaggaagaag caaggttgta ataaaaagac 900
agctagaaaa gctccagccc cagtcaagcc tccagcccca gtgcaaaaaa aaaaacaacc 1020
aaacaagaaa gccagagtct agtccaaaaa agaggagcgt ttgaaaaaag acatcaagaa 1080
actccagaag agggctttgc agtctccagg ggaagtggga ttgcccagg caaggagacc 1140
ttgggagtca gacatgagcc cagaggcaga gggagactct gagggtgaag agtctgagta 1200
tttcccacaa gaggaggagg aagaggagga agatgacagc agtctgagta 1260
cctgtctgga gatggtactg actatgagct gaagcctctg cccaaggcgc ggaacggcca 1320
gaagaagtg cagtgccagg agattgatga tgaacttttc ccaagttctg ggaagaagc 1380
tgaagctgct tctgtaggag aaggaggagg agggagtcgg aaagtgggaa gataccgga 1440
tgatggagat gaagattatt ataagcagcg gtttaaggaga ttgaataaac tgaagactga 1500
ggacaaagag aaacgtctga agctggagga cgattctgag gaaagtgaat ctgaatttga 1560
cgaaggtttt aaagtgcagg gttttctggt caaaaaagct tttaagtacc agacagcagg 1620
tgttaggttt cgtgtgggaat tgcactgcc aagataatgc gcaggcagga ggaattctgg 1680
gggattgggc aagaccaatc agataatgc cttctggcca ggtctgagct atcagaagat 1740
caggactcgt ggttcaaat acaggtttga ggggttgggt ccaactgtaa ttgtctgtcc 1800
acacaagctg atgcatcagt ggggtgaagg atttcacacg atttcacacg agtctcagat 1860
ggcaatttcta catgaaaccc gttcctatac ccacaaaaag gagaaacata ttcgagatgt 1920
tgctcaattg catggaattt tgatcacact ttaactctac attcgattga tgcagattga 1980
cattagcagc tatgactggc actatgtgat cttggacgaa ggacacaaaa ttcgaaatcc 2040
aaatgctgct gtcacctctg cttgcaaaaa gtttctgacc cctcatcgcc caattctgtc 2100
tggtctaccg atgcaaaata acctccgaga gctgtggtcg cctcttgact tcattctccc 2160
gggaaggatga ggcacgttgc ctgtgtttat ggagcagttc tctgtcccca tccatcaggg 2220

```

```

gggatattca aatgettccc cagttacaggt caaaactgct tacaagtgtg catgtgtctt 2280
acgagataacc ataaatccat acctactcgc gagaatgaag tcagatgtca agatgagcct 2340
ttcttttgcca gataaaatag aacaggtctt attttgcctg cttacagatg agcagcataa 2400
agttccacaaa aattttcgtt atttccaaaga agttttacag attctcaatg gagagatgca 2460
gattttctccc gactcttaag cctcaagaaa aattttgcaac caccctgatc tctttctctg 2520
aggtcccaag atctctcaaa gtcttctcta tgatgaacta gaagaagatc agttttggta 2580
ctggaaacgt tctgggaaaa tgaattgtgt tgagtctttg ttgaaaaatg ggcacaagca 2640
gggtgcagca gtattgttgt tttctcagtc aaggcagatg ctggacatca ttgaagtatt 2700
ccttagagccc caaaagtata cctatctcaa ggtgatgtgt accactacaa tagcttcaag 2760
acagccactg attacagagt acaatgagga cacatccata tttgtgtttc tctgaccac 2820
gcgggtgggc ggcttaggtg tcaacctgac cggggcaaac agagtgttca tctatgacc 2880
agactggaaac ccaagcacgg acacgcaggg ccggggagca gcattggaga taggccagaa 2940
gaagcaagtg actgtgtaca ggctcctgac tgcgggcacc attgaagaaa atgtaccaca 3000
ccgacaaatc ttcaagcagt ttttgacaaa tagagtgtca aaagacccaa aacaaagggc 3060
gtttttcaaa tccaatgatc tctatgagct atttactctg actagtcctg atgcatccca 3120
gagcatgaaa acaagtgcac tttttgcagg aactggatca gatgttcaga caccacaaat 3180
ccatctaaaa gaagggatc aaccagcctt tggagcagac catgatgttc caaaacgcaa 3240
gaagtctccc gcttcaacaa tatctgtaaa tgatgccaca tcatctgaag agaaatctga 3300
ggctaaaggc gctgaagtga atgcagtaac ttctaactga agtgatcctt tgaagatga 3360
ccctcacatg agtagtaagt taactagcaa tgataggctt ggagaagaga caaatctcag 3420
atctggacca gaagagttgt cagtgtattg tggaaatggg gaatgttcaa atctctcagg 3480
ttacaggcaaa acttctatgc catctgggtg tgaagcatt gatgaaaagt taggtctttc 3540
atcaaaaaga gaagagccca gccaggctca aacagaagct ttttgggaga ataaacaaat 3600
ggaaaaataa ttttataagc acaagtcaaa aacaaaacat catagtgtgg cagaagaaga 3660
gacctgtggg aaactcttga gaccaaaagc aactcctaag aactcctaag attgcagaga 3720
gcccaagttt gaaggaaact cgaattccca cctgggtgaag aaaaggcgtt accagaagca 3780
agacagtga acaactagtg agggccaagg acagagcaat gacgattatg cactgtatga 3840
gcttttcaaa aatcagttg gcgtgcacag tgtcatgaag cacgatgcca tcatggatgt 3900
agccagccca ggttatgtac ttgttgaggc agaagccaac cgagtggccc aggatggcct 3960
gaagcactg aggtctcttc gtacagcgtt tctgggagca gtgtctgggt tccccacctg 4020
gactggccac agggggattt ctggtgcacc agcaggaaaa aagagttagt ttgttaagaa 4080
aaggaaattc aaactctctg tgcagcatcc ttcatcaaca tctccaacag agaagtgcga 4140
ggatggctgc atgaaaaagg agggaaaaa taatgtccct gagcatttta tgggaagagc 4200
agaagatgca gactcttcat ccgggcccct cgcttctccc tcaactcttg ctataatgag 4260
agctagaaaac cactctgatt gccagagcgc tttagaaggt gaaagcggcg ctcaggagga 4320
acgttctgccc ctgtgcccac ccacagaaca cgatgacctt ctgggtggga tgagaaactt 4380
catcgctttc caggccacaca ctgatggcca ggccaagcacc agggagatc tgaggagtt 4440
tgaatcccaag ttatctgcat cacagttctg tgtcttccga gaactattga gaaatctgt 4500
cactttccat agaacttttg gtgttgaagg aatttggaaa ctcaagccag aatactgta 4560
aacaacattg ctctctaaac ttccaagtcc cttttcttaa cgggcatttc tgattattaa 4620
tttattatta ataatcagtg ttgtcaatgg aagttggctg cacttgatgt ttgtttgcat 4680
gtgtctacc tcagaatata aacttttaagg aagg 4714

```

<210> 13

<211> 1377

<212> DNA

<213> Homo sapiens

<400> 13

```

agctaggtgc tcggagtggt ccagagatgg cggcgggcca cggggctttg ccggaggcgg 60
cggcttttag gcaaccgcgc gagctgcctg cctcggtgct ggccagatgc gagcgggaagc 120
ggcagcgggc actgatgtct gccacggccc ggctgggtgc ccggccctat tcggcgacgg 180
cggctgcggc cacttgaggc atggctaatg taaaagcagc cccaagatac attgcacag 240
gaggaggctt cattttgaaa gaggaaagag aagaagaaca gaaaattgga aaagtgttct 300
atcaacacgg actcgttatg gaatttgatg atgttaatgc cgaagaatgt ggaagaaagt 360
ttatggattc ttatcttatg aaccactttg atttgcacac ttgtgataac tgcagagatg 420
ctgtgatata acacaagctt ataaccaaaa cagaggcaaa acagaatatc cttctgaag 480

```

actgtgattt	agaaaaaaga	gagccacctc	ttaaatttat	tgtgaagaag	aatccacatc	540
attcacaatg	gggtgatatg	aaactctact	taaagttaca	gattgtgaag	aggtctcttg	600
aagtttgggg	tagtcaagaa	gcattagaag	aagcaaaaga	agtccgacag	gaaaaccgag	660
aaaaaatgaa	acagaagaaa	tttgataaaa	aagtaaaaga	attgcggcga	gcagtaagaa	720
gcacgctgtg	gaaaaggag	acgattgttc	atcaacatga	gtatggacca	gaagaaaacc	780
tagaagatga	catgtaccgt	aagacttgta	ctatgtgtgg	ccatgaactg	acatatgaaa	840
aaatgtgatt	ttttagtcca	gtgacctgtt	ttatagaatt	ttatatatta	ataaaggaaa	900
tttagattgg	tccttttcaa	aattcaaaaa	aaaaagcaac	attctcatag	atgaatgaaa	960
cccttgata	agtaatactt	cagtataaat	tatgtatgtt	atggcttaaa	agcaagtttc	1020
agtgaaggtc	acctggcctg	gttgtgtgca	caatgtcatg	tctgtgattg	cctctttaca	1080
acagagatgg	gagctgagtg	ctagagtagg	tgacagaagt	gtaggtcagc	tacaaatttg	1140
aggacaagat	accaaggcaa	accctagatt	ggggtagagg	gaaaagggtt	caacaaaggc	1200
tgaactggat	tcttaaccaa	gaaacaaata	atagcaatgg	tggtgcacca	ctgtacccca	1260
ggttctagtc	atgtgttttt	taggacgatt	tctgtctcca	cgatgggtga	aacagtgagg	1320
aactactgct	ggaaaaagcc	ctaatagcag	aaataaacat	tgagttgtac	gagtcctg	1377